

DETAILED ACTION

This communication is a first Office Action Non-Final rejection on the merits.

Claims 1-23 are pending and have been considered below.

Specification

1. The disclosure is objected to because of the following informalities: "Fig 2B" (page 10, line 33) should be replaced with "Fig 1B". In addition, "maximise" (page 12, line 18) is misspelled. In addition, "steel rods 82a" (page 18, line 33) should be replaced with "steel rods 82b".

Appropriate correction is required.

Drawings

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 100, 120, 105, 31, 34.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "121" has been used to designate both top side rails and planar faced panels (page 11, lines 3, 24, 31), reference character "122" has been used to designate both top side rails and steel plate (page 12, lines 2, 7), reference character "124" has been used to designate both double header rail and strip of high strength steel (page 12, line 6), and reference character "125" has been used to designate both a door sill and a steel angle plate (page 12, lines 11, 15).

The drawings are objected to because they are missing label references which are also not in the specification. These missing characters are: 32, 63a-63c, 76-79, and 100.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

3. Claims 1, 5, 9, 13, and 15 are objected to because of the following informalities: The term "and/or" is indefinite. Appropriate correction is required.
4. Claims 2-23 are objected to because of the following informalities: The preamble should read "The Structure" instead of "A structure". Appropriate correction is required.

5. Claims 22 and 23 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit parent claim 1. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. The claims refer to two or more containers, this does not constitute a further limitation of parent claim 1 which only refers to a single structure.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 22 and 23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 22 and 23, the recitation "A collection of two or more structures" renders the claims indefinite since it conflicts with the parent claim that recites "A structure". Thus it is unclear as to which other structure the applicant is referring to.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1-5, and 7-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Sobolev (U.S. Patent No. 5,219,629).

As per claim 1, Sobolev teaches a structure comprising a walled freight container enclosing an interior volume of space (used in freight cargo containers; col. 3, lines 66-67), the container being at least partially clad internally and/or externally with barrier structure (sandwich panels; abstract), the barrier structure being constructed from plurality of interconnected panels (use sandwich panels as structural elements; col. 3, lines 16-17) of matrix material (a resin core between and bonded to metal sheets; abstract) incorporating reinforcement elements (the resin core comprises a reinforced thermoset resin core; abstract), and means for human entry into and exit from the interior space of the container being located in a wall of the container and, if necessary for such entry and exit, also in the barrier structure (uses and advantages of the invention include trailer doors; col. 3, lines 63-67).

As per claim 2, Sobolev teaches the barrier structure is in the form of a wall (figure 3A).

As per claim 3, Sobolev teaches a six-sided box having a top, bottom, side, and end walls, one end wall incorporating at least one door (the panels are used in freight cargo containers; col. 3, lines 66-67, and it is construed that containers have six sides), at least the top, side and end walls including the door(s) thereof being clad internally of the container with a barrier structure comprising a plurality of interconnected panels of matrix material incorporating reinforcement elements, the panels being fixed to the container walls (laminates which comprise two metal sheets with a filled resin core; abstract), the structure being transportable as a unit (the panels are used in freight

cargo containers; col. 3, lines 66-67, and it is construed that containers are transportable).

As per claim 4, Sobolev teaches the panels are interconnected by discrete interconnection elements (panels or laminates which comprise two metal sheets with a filled resin core; abstract).

As per claim 5, Sobolev teaches the barrier structure includes panel support means for reducing the deformation of the barrier structure when subjected to a blast and/or ballistic force (laminate had good impact resistance and displayed excellent rigidity; col. 33, lines 5-6).

As per claim 7, Sobolev teaches the matrix material of the panels of the barrier structure is cementitious, ceramic, metallic or resinous (metal sheets with a filled resin core; abstract).

As per claim 8, Sobolev teaches the reinforcement elements present in the matrix material of the panels of the barrier structure comprise elongated or sheet-like main reinforcement elements (panels or laminates which comprise two metal sheets; abstract) and secondary compact shaped reinforcement elements distributed in the matrix material surrounding the main reinforcement (a filled resin core; abstract).

As per claim 9, Sobolev teaches the main reinforcement is selected from one or more of the following, namely rod; wire; cable; interlacings of rod and/or wire and/or cable; mesh; sheet or plate; and perforated sheet or plate materials (two metal sheets; abstract).

As per claim 10, Sobolev teaches the secondary reinforcement is selected from one or more of the following, namely lumps, fibres, whiskers and flake materials (fiber reinforcement applied to the metal sheet; col. 8, lines 25-27).

As per claim 11, Sobolev teaches a face of the barrier structure is clad with sheet, plate or tile elements (hardboard, particleboard, or flakeboard bonded to metal surfaces; abstract).

As per claim 12, Sobolev teaches a gap between a wall of the container and its barrier structure (figure 3A shows a gap between both panels 35; which when used with a container would embody a gap between the barrier and the container wall).

As per claim 13, Sobolev teaches the gap is bridged by filler material and/or by discrete connector elements interconnecting the container wall and the barrier structure (concrete pouring forms which could be used in conjunction with the laminates; col. 4, lines 3-4).

As per claim 14, Sobolev teaches the filler material is a foam particulate or fibrous material (fiber reinforcement applied to the metal sheet; col. 8, lines 25-27).

As per claim 15, Sobolev teaches the walls of the container are of metal, and/or wood, and/or fibre filled resin (fiber reinforcement applied to the metal sheet; col. 8, lines 25-27) (laminated of plywood core; abstract).

As per claim 16, Sobolev teaches the container is a 6-sided box (the panels are used in freight cargo containers; col. 3, lines 66-67, it is construed that containers have six sides).

As per claims 17-20, Sobolev teaches the barrier structure is substantially coextensive with at least one side wall of the container (the panels are used in freight cargo containers; col. 3, lines 66-67, which implies that they could be contiguous with all of the walls of a container).

As per claim 21, Sobolev teaches an inner and an outer wall, and the barrier structure is interposed at least between the inner and outer walls (figure 3A shows inner and outer walls with a barrier structure in between).

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sobolev in view of Ott (European Patent No. EP 0 988 809 A2).

Sobolev fails to disclose means for anchoring the structure in the ground.

Ott discloses a fastening for a transportable container with means for anchoring the container in the ground (Derwent abstract).

Therefore from the teaching of Ott, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the freight container of Sobolev to include a ground anchor as taught by Ott since this protects the container from being easily moved (Derwent abstract).

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12. As best understood, claims 22-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sobolev (U.S. Patent No. 5,219,629) in view of Rizk (U.S. Patent No. 4,545,159).

As per claim 22, Sobolev fails to disclose two or more structures positioned in a desired relationship with each other.

Rizk discloses transportable building modules with connections between adjacent modules (abstract).

Therefore from the teaching of Rizk, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the containers of Sobolev to include the two or more structures taught by Rizk, such that at least two structures are in a relationship to one another since modular concepts of construction in which modules are secured to additional modules to produce a desired structure are well established in the art (col. 1, lines 17-20).

As per claim 23, Sobolev fails to disclose at least two containers abut each other.

Rizk discloses transportable building modules with connections between adjacent modules (abstract).

Therefore from the teaching of Rizk, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the containers of Sobolev include the two or more structures taught by Rizk, such that at least two containers are abutting each other since modular concepts of construction in which modules are secured to additional modules to produce a desired structure are well established in the art (col. 1, lines 17-20).

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: U.S. Patent No. 6,412,231, Palatin, Blast Shelter, Nov. 17, 2000. U.S. Patent No. 4,722,155, Ericsson, Mobile Building Construction, Feb. 2, 1988. U.S. Patent No. 5,979,684, Ohnishi et al, Cargo Container, Nov. 9, 1999. European publication EP 23808 A1, Prot, Modular Shelter and Method of Manufacturing Same, Aug. 26, 1987. U.S. Patent No. 6,435,363, Fingerhut et al, Explosion Resistant Aircraft Container, Jan. 12, 2001. DE 3521884 C1, Zimmer, Inner shuttering for a shelter which is intended for individuals, Oct. 9, 1986. U.S. Patent No. 5,706,614, Wiley, Modular Building Having a Steel Shipping Container Core, Jan. 13, 1998.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to OMAR HIJAZ whose telephone number is (571)270-5790. The examiner can normally be reached on Mon-Fri 9:30 a.m. - 7:00 p.m. (alternating Fridays).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynda Jasmin can be reached on (571)272-6782. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

OFH

/Lynda Jasmin/

Supervisory Patent Examiner, Art Unit 4165